

WHAT IS CLAIMED IS:

1 1. A facsimile communication method being a non-standard
2 facsimile communication method, which is based on ITU-T
3 Recommendation T-30 and executed by the use of a non-standard
4 facilities signal NSF (hereinafter referred simply to as "NSF")
5 and a non-standard facilities set-up signal NSS (hereinafter
6 referred simply to as "NSS"), comprising the steps of:

7 adding independent transmission procedure capability
8 information to said NSF and said NSS;

9 transmitting said NSS including said independent
10 transmission procedure capability information in the case when
11 said NSF including said independent transmission procedure
12 capability information is detected by a transmission side; and

13 implementing an independent transmission procedure between
14 both transmission and reception sides after detecting said NSS by
15 the reception side.

1 2. A facsimile communication method as claimed in claim 1
2 wherein:

3 in said independent transmission procedure, a time for
4 delivering preamble signals added to all the binary codes to be
5 used in a facsimile communication procedure is reduced to a
6 predetermined time, which is shorter than that defined by said
7 Recommendation, on and after said NSF including said independent
8 transmission procedure capability information transmitted from
9 the reception side was correctly discriminated by said
10 transmission side as well as on and after said NSS including said

11 independent transmission procedure capability information
12 transmitted from the transmission side was correctly discriminated
13 by said reception side.

1 3. A facsimile communication method as claimed in claim 2,
2 wherein:

3 in said independent transmission procedure, after said NFS
4 including said independent transmission procedure capability
5 information, a called subscriber identification signal CSI
6 (hereinafter referred simply to as "CSI"), and a digital
7 identification signal DIS (hereinafter referred simply to as
8 "DIS") transmitted from the reception side were correctly
9 discriminated by the transmission side as well as after said NSS
10 including said independent transmission procedure capability
11 information, a transmitting subscriber identification signal TSI
12 (hereinafter referred simply to as "TSI"), a digital command signal
13 DCS (hereinafter referred simply to as "DCS"), and a training check
14 signal TCF (hereinafter referred simply to as "TCF"), which are
15 returned from the transmission side to the reception side with
16 respect to the signals transmitted from said reception side were
17 correctly discriminated by the reception side, said reception side
18 transmits repeatedly a first independent signal with a
19 predetermined first redelivery interval for a purpose to notify
20 said transmission side to the effect that said signals were
21 correctly detected by the reception side, that a confirmation to
22 receive signal CFR (hereinafter referred simply to as "CFR") is
23 in the process of preparing transmission, and that communication
24 between said transmission side and said reception side is in

25 ongoing;

26 when the preparation for transmission of said CFR is completed,
27 either the reception side transmits said CFR after transmission
28 was completed if said first independent signal is in the process
29 of the transmission, or said reception side transmits immediately
30 said CFR if said first independent signal is not in the process
31 of the transmission; and

32 said reception side transmits a disconnect signal DCN
33 (hereinafter referred simply to as "DCN") in the case where said
34 preparation for transmission of said CFR is not completed within
35 a predetermined first waiting time.

1 4. A facsimile communication method as claimed in claim 3,
2 wherein:

3 said first redelivery interval of said first independent
4 signal is sufficiently shorter than a redelivery interval of a
5 binary code signal in a standard facsimile transmission procedure.

1 5. A facsimile communication method as claimed in claim 4,
2 wherein:

3 in said independent transmission procedure, the transmission
4 side waits for said CFR signal after transmitting said TCF from
5 said transmission side, but if no signal is received within a
6 predetermined second waiting time after transmitting said TCF,
7 said transmission side redelivers said NSS, said TSI, said DCS,
8 and said TCF;

9 the number of times for redelivery of said NSS, said TSI, said
10 DCS, and said TCF is fixed up to two;

11 if no signal is received within said second waiting time after
12 a second time redelivery of said NSS, said TSI, said DCS, and said
13 TCF, in other words, after a third time transmission of said NSS,
14 said TSI, said DCS, and said TCF, said transmission side transmits
15 said DCN;

16 when said first independent signal was received within said
17 second waiting time after transmitting said TCF, said transmission
18 side waits further for said CFR or said first independent signal
19 during said second waiting time;

20 if no signal is received within said second waiting time after
21 receiving said first independent signal, said transmission side
22 transmits said DCN;

23 when said CFR was received either within said second waiting
24 time after transmitting said TCF, or within said second waiting
25 time after receiving said first independent signal, said
26 transmission side transmits repeatedly a second independent signal
27 with a predetermined second redelivery interval for a purpose to
28 notify said reception side to the effect that said CFR was correctly
29 detected, that image data is in the process of preparing
30 transmission, and that communication between said transmission
31 side and said reception side is in ongoing;

32 when the preparation for transmission of said image data is
33 completed, either said transmission side transmits said image data
34 after completing transmission of said second independent signal
35 if it is in the course of the transmission, or said transmission
36 side transmits immediately said image data if said second
37 independent signal is not in the course of the transmission; and

38 when said preparation for transmission of said image data was

39 not completed within said predetermined first waiting time after
40 receiving said CFR, said transmission side transmits said DCN.

1 6. A facsimile communication method as claimed in claim 5,
2 wherein:

3 said second redelivery interval of said second independent
4 signal is sufficiently shorter than a redelivery interval of a
5 binary code signal in a standard facsimile transmission procedure.

1 7. A facsimile communication method as claimed in claim 6,
2 wherein:

3 in said independent transmission procedure, the reception
4 side waits for said image data after transmitting said CFR from
5 said reception side, but when said second independent signal was
6 received within a predetermined fourth waiting time after
7 transmitting said CFR, said reception side waits further for either
8 said image data or said second independent signal for said fourth
9 waiting time;

10 if no signal is received within said fourth waiting time after
11 transmitting said CFR, said reception side redelivers said CFR
12 after a lapse of said fourth waiting time;

13 the number of times for redelivery of said CFR is fixed up
14 to two;

15 if said second independent signal or said image data is not
16 received within said fourth waiting time after a second time
17 redelivery of said CFR, in other words, after a third time
18 transmission of said CFR, said reception side transmits said DCN;
19 and

20 when said second independent signal or said image data is not
21 received within said fourth waiting time after receiving said
22 second independent signal within said fourth waiting time after
23 transmission of said CFR, said reception side transmits said DCN.

1 8. A facsimile communication method as claimed in claim 7,
2 wherein:

3 in said independent transmission procedure, the transmission
4 side transmits a post message signal after transmitting said image
5 data;

6 when said post message signal is received after receiving said
7 image data, the reception side transmits repeatedly said first
8 independent signal with said first redelivery interval for a
9 purpose to notify said transmission side to the effect that said
10 image data and said post message signal were correctly detected,
11 that a message confirmation signal MCF (hereinafter referred
12 simply to as "MCF") is in the process of preparing transmission,
13 and that communication between said transmission side and said
14 reception side is in ongoing; and

15 when the preparation for transmission of said MCF is completed,
16 said reception side transmits said MCF after completing
17 transmission of said first independent signal in the case where
18 it is in the process of transmission, or said reception side
19 transmits immediately said MCF in the case where said first
20 independent signal is not in the process of transmission.

1 9. A facsimile communication method as claimed in claim 8,
2 wherein:

3 in said independent transmission procedure, the transmission
4 side waits for said MCF or said first independent signal within
5 a second waiting time after transmitting said post message signal,
6 but if no signal was received within said second waiting time after
7 delivering said post message signal, said transmission side
8 redelivers said post message signal;

9 the number of times for redelivery of said post message signal
10 is fixed up to two;

11 if said MCF is not received within said second waiting time
12 after a second time redelivery of said post message signal, in other
13 words, after a third time transmission of said post message signal,
14 said transmission side transmits said DCN;

15 if said post message signal is a multipage signal MPS
16 (hereinafter referred simply to as "MPS"), the transmission side
17 waits further for said first independent signal or said MCF during
18 said second waiting time in the case when said first independent
19 signal was received within said second waiting time after
20 transmitting said MPS;

21 said transmission side transmits said DCN in the case where
22 no signal is received within said second waiting time after
23 receiving said first independent signal;

24 if said post message signal is an end of procedure signal EOP
25 (hereinafter referred simply to as "EOP") or an end of message
26 signal EOM (hereinafter referred simply to as "EOM"), the
27 transmission side waits further for said first independent signal
28 or said MCF during said fourth waiting time in the case when said
29 first independent signal was received within said second waiting
30 time after transmitting said EOP or said EOM; and

31 when no signal is received within said fourth waiting time
32 after receiving said first independent signal, the transmission
33 side transmits said DCN.

1 10. A facsimile communication method as claimed in claim 9,
2 wherein:

3 in said independent transmission procedure, if said post
4 message signal is said EOP, a phase D procedure based on said
5 Recommendation is conducted on and after said MCF was transmitted
6 from the reception side, and the MCF thus transmitted was received
7 by the transmission side; more specifically, said reception side
8 waits for said DCN within said second waiting time after
9 transmitting said MCF, and when said EOP was received again during
10 waiting for said DCN, the reception side redelivers said MCF, while
11 said transmission side transmits said DCN after receiving said MCF.

1 11. A facsimile communication method as claimed in claim 10,
2 wherein:

3 in said independent transmission procedure, if said post
4 message signal is said MPS, the transmission side transmits
5 repeatedly said second independent signal with said second
6 redelivery interval for a purpose to notify the reception side to
7 the effect that MCF was correctly detected by said transmission
8 side after receiving said MCF, that image data is in the process
9 of preparing transmission, and that communication between said
10 transmission side and said reception side is in ongoing;

11 when the preparation for transmission of said image data is
12 completed, said transmission side transmits said image data after

13 completing transmission of said second independent signal in the
14 case where it is in the process of transmission, or the transmission
15 side transmits immediately said image data in the case where it
16 is not in the process of transmission; and

17 if the preparation for transmission of said image data was
18 not completed within said first waiting time after receiving said
19 MCF, said transmission side transmits said DCN.

1 12. A facsimile communication method as claimed in claim 11,
2 wherein:

3 in said independent transmission procedure, if said post
4 message signal is said MPS, the reception side waits for said image
5 data after transmitting said MCF, but when said second independent
6 signal was received within said fourth waiting time after
7 transmitting said MCF, said reception side waits further for said
8 image data or said second independent signal during said fourth
9 waiting time;

10 if said second independent signal or said image data is not
11 received within said fourth waiting time after transmitting said
12 MCF, said reception side redelivers said MCF again;

13 the number of times for redelivery of said MCF is fixed up
14 to two;

15 if said second independent signal or said image data is not
16 received within said fourth waiting time after a second time
17 redelivery of said MCF, in other words, after a third time
18 transmission of said MCF, said reception side transmits said DCN;
19 and

20 if said second independent signal or said image data is not

21 received within said fourth waiting time after receiving said
22 second independent signal within said fourth waiting time after
23 said MCF was transmitted, said reception side transmits said DCN.

1 13. A facsimile communication method as claimed in claim 12,
2 wherein:

3 in said independent transmission procedure, if said post
4 message signal is said EOM, the reception side prepares for
5 transmission of said NSF, said CSI, and said DIS after transmitting
6 said MCF to transmit these signals after completing the
7 preparation;

8 when said EOM is received again within a predetermined third
9 waiting time after transmitting said MCF before transmission of
10 said NSF, said CSI, and said DIS, the reception side transmits again
11 said MCF;

12 if a preparation for transmission of said NSF, said CSI, and
13 said DIS is not completed within said predetermined third waiting
14 time after transmitting said MCF, said reception side transmits
15 said DCN;

16 said transmission side waits for said NSF, said CSI, and said
17 DIS during said first waiting time after receiving said MCF; and

18 if these signals are not received within said first waiting
19 time, said transmission side transmits said DCN.

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